Classroom Action Research

Madison Metropolitan School District

http://www.madison.k12.wi.us/sod/car/carhomepage.html

What is Action Research?

Action Research is a process in which participants examine their own educational practice systematically and carefully using the techniques of research. It is based on the following assumptions:

- teachers and principals work best on problems they have identified for themselves;
- teachers and principals become more effective when encouraged to examine and assess their own work and then consider ways of working differently;
- teachers and principals help each other by working collaboratively;
- working with colleagues helps teachers and principals in their professional development.

Heidi Watts, Antioch Graduate School

What Action Research Is Not

1. It is **not** the usual things teachers do when they think about their teaching. Action Research is systematic and involves collecting evidence on which to base rigorous reflection.
2. It is **not** just problem-solving. Action Research involves problem-posing, not just problem-solving. It does **not** start from a view of problems as pathologies. It is motivated by a quest to improve and understand the world by changing it and learning how to improve it from the effects of the changes made.
3. It is **not** research on other people. Action Research is research by particular people on their own work to help them improve what they do, including how they work with and for others. Action Research does **not** treat people as objects. It treats people as autonomous, responsible agents who participate actively in making their own histories by knowing what they are doing.
4. It is **not** the scientific method applied to teaching. Action Research is **not** just about hypothesis-testing or about using data to come to conclusions. It is concerned with changing situations, not just interpreting them. It takes the researcher into view. Action Research is a systematically-evolving process of changing both the researcher and the situations in which he or she works. The natural and historical sciences do not have this aim.

Henry and Kemmis

What Do Teacher Researchers Do?

Teacher researchers...

- develop research questions based on their own curiosity about teaching and learning in their classrooms;
- examine their underlying assumptions about teaching and learning;
- systematically collect data from and with their students;
- share and discuss their data and research methodology with fellow teacher researchers;
- analyze and interpret their data with the support of their colleagues;
- write about their research;
- share their findings with students, colleagues, and members of the educational community;
- discuss with colleagues the relationships among practice, theory, and research;
- assume responsibility for their own professional growth.Source:

  Fairfax County Public Schools, Office of Research and Policy Analysis

What Are Some Effects of Teacher Research Projects?

Some effects are:

- increased sharing and collaboration across departments, disciplines, and grade levels;
- increased dialogue about instructional issues and student learning;
- enhanced communication between teachers and students;
- improved performance of students;
- revision of practice based on new knowledge about teaching and learning;
- teacher-designed and initiated staff development;
- development of priorities for schoolwide planning and assessment efforts;
- contributions to the profession's body of knowledge about teaching and learning.

Source: Fairfax County Public Schools, Office of Research and Policy Analysis

Five Phases of Action Research

Phase I - Problem Identification:

- Why do you want to do it? Is it an important and practical problem, something worth your time and effort, something that could be beneficial to you, your students and others?
- Is the problem stated clearly and in the form of a question? Is it broad enough to allow for a range of insights and findings? Is it narrow enough to be manageable within your timeframe and your daily work?

Phase II - Plan of Action

- Will you develop and implement a new strategy or approach to address your question? If so, what will it be?
- Will you focus your study on existing practices? If so, which particular ones?
- What is an appropriate timeline for what you are trying to accomplish?

Phase III - Data Collection

- What types of data should you try to collect in order to answer your question?
- How will you ensure that you have multiple perspectives?
- What resources exist and what information from others might be useful in helping you to frame your question, decide on types of data to collect, or to help you in interpreting your findings?

Phase IV - Analysis of Data

- What can you learn from the data? What patterns, insights, and new understandings can you find?
- What meaning do these patterns, insights, and new understandings have for your practice? for your students?

Phase V - Plan for Future Action

- What will you do differently in your classroom as a result of this study?
- What might you recommend to others?
- How will you write about what you have learned so that the findings will be useful to you and to others?

- Adapted from the St. Louis Action Research Evaluation Committee

Reasons to Do Action Research

What works...

- To figure out a particular "how to" of teaching
- To demonstrate to principals, parents, students, ourselves that a teaching practice is useful

Collegiality...

- To have time to talk about teaching with our colleagues
- To develop better overall relationships with our colleagues

Personal/Professional Development...

- To be supported and pushed in our development as teachers
- To recognize that growth doesn't just happen, that often we need more formal structures in order to grow
- To enable teachers to engage in intellectual pursuits and become continuous learners

Starting where we are...

- To start with the teacher that I am, not that someone else thinks I should be

Consistency...

- To practice being a continuous learner, to live by what I am trying to help my students learn
- To connect teachers in different roles, schools, districts

Challenging the norm...

- To create new forms of professional development
- To create new forms of research
- To construct knowledge with teachers at the center

Robin Marion - Professor at National Louis University

STARTING POINTS

- Ask individuals to complete the "Starting Points" questions (see below). Tell them to think broadly about many areas for possible questions
- Go around the group one at a time and list on a flipchart all of the different areas that surface from this handout.
- Ask each person to take one of the areas from the flipchart (could be an idea of theirs or someone else's) and practice writing a question in that area.
- Go around the group, and one at a time, ask each person to read their question very slowly twice. The group should listen to the questions. Absolutely no comments are made after each question is read.
- Ask the group to generate characteristics, qualities, and guidelines for what makes a good action research question.

1. I would like to improve...
2. I am perplexed by...
3. Some people are unhappy about...
4. I'm really curious about...
5. I want to learn more about...
6. An idea I would like to try out in my class is...
7. Something I think would really make a difference is...
8. Some I would like to do to change is...
9. Right now, some areas I'm particularly interested in are...

Generated by one Madison Metropolitan School District Action Research Group

Guidelines for Developing a Question

1. One that hasn't already been answered
2. Higher level questions which get at explanations, reasons, relationships. "How does...?", "What happens when...?"
3. Not "Yes-No" question
4. Everyday language; avoid jargon
5. Not too lengthy; concise; doesn't have to include everything you're thinking
6. Something manageable; can complete it
7. Something do-able (in the context of your work)
8. "Follow your bliss"; want to feel commitment to the question; passion
9. Keep it close to your own practice; the further away you go, the more work it is
10. Should have tension; provides you an opportunity to stretch
11. Meaningful to you; provides you a deeper understanding of the topic
12. Question leads to other questions

Generated by one Madison Metropolitan School District Action Research Group

Guidelines for Data Collection

Asking the right questions is the key skill in effective data collection.

- Be clear as to why you are collecting data. Formulate good questions that relate to the specific information needs of the project.
- Be clear about how you are going to use the data you collect.
- Design a process to collect data. Our beliefs and values affect this selection process.
- Use the appropriate data analysis tools and be certain the necessary data are being collected. The data:
    - must be accurate;
    - should be useful;
    - must not be too time consuming; and
    - must be reliable enough to allow you to formulate hypotheses and develop strategies with confidence.
- Decide how much data is needed. Ask:
    - what is an accurate sample size?
    - for how long should the data be collected?
- Make sure that the data make your job easier.
- Use multiple sources of data to increase the believability of the findings. Collect data from more than two sources or points of view, each which provides a unique justification with respect to relevant information about the situation.
- Present the data in a way that clearly communicates the answer to the question.
- Be aware that how you set up the situation influences the results.
- Review the data. Ask:
    - do the data tell you what you intended?
    - can you display the data as you intended?
- Do not expect too much from data. Remember:
    - data should indicate the answer to the question asked during the design of the collection process.
    - you do not make inferences from the data that the data will not support.
    - data don't stand alone. It's the meaning we apply to the data that is critical. "Data do not drive decisions; people do."
    - the stronger the disagreements with the data, the bigger the learning potential. It is important to validate the different views and try to come up with a world view.
- Visually display the data in a format that can reveal underlying patterns.
    - Look for patterns related to time or sequence as well as patterns related to differences in staff and other factors.
- Remember that your primary job is not data collection. No research method should interfere with your primary job.
- While good information is always based on data (the facts), simply collecting data does not necessarily ensure that you will have useful information.
- The key issue is not how do we collect data, but how do we generate useful information?

Data Collection: The 5 W's and an H

WHY are we collecting this data?

- What are we hoping to learn from the data?
- What are you hoping to learn from using this particular data collection strategy?
- Is there a match between what we hope to learn and the method we chose?

WHAT exactly are we collecting?

- What different sources of data will allow us to learn best about this topic?
- What previously existing data can we use?
- How much data do we need to really learn about this topic?

WHERE are we going to collect the data and for how long?

- Are there any limitations to collecting the data?
- What support systems need to be in place to allow for the data collection to occur?
- Are there ways to build data collection into the normal activities of the classroom?

WHEN are we going to collect the data and for how long?

- Have we built into the plan collecting data at more than one point in time?
- Are there strategies we can use to easily observe and record data during class?
- Can you afford the time to gather and record data using the strategies you have selected?

WHO is going to collect the data?

- Are there data which can be generated by students?
- Is there a colleague who can observe in your room or a student teacher who can assist with data collection?
- What can you do yourself without it being too overwhelming?

HOW will data be collected and displayed?

- How will you collect and display the qualitative data? the quantitative data?
- What plan do you have for analyzing the data?
- To whom will you present what you have learned?

Techniques for Gathering Data

1. **Interviews** with students, parents, teachers
2. **Checklists** of skills, behaviors, abilities, movement, procedures, interactions, resources
3. **Portfolios** of a range of work from students of different abilities around a particular topic; a representation of a total experience; a collection of documents for analysis
4. **Individual files** of students' work (e.g., tapes, samples of work, art work, memos, photos of models/projects, reports), of students' opinions; of student attitudes, of students' experiences
5. **Diaries/journals** written by teachers, students, parents, class groups, teachers
6. **Field notes/observation records** - informal notes written by a teacher
7. **Logs** of meetings, lessons, excursions, school expectations, material used
8. **Student-teacher discussion/interaction** - records of comments and thoughts generated by students
9. **Questionnaires** of attitudes, opinions, preferences, information
10. **Audiotapes** of meetings, discussions in class or about data gathered, games, group work, interviews, whole class groups, monologues, readings, lectures, demonstrations
11. **Videotapes** of classrooms, lessons, groups, demonstrations, a day in a school, lunch times
12. **Still photography** of groups working, classrooms, faces, particular students over time, at fixed intervals in a lesson
13. **Time-on-task analysis** of students, teachers; over a lesson, a day, a week
14. **Case study** - a comprehensive picture/study of a student or a group of students

Guidelines for Analyzing Your Data

- Design a systematic approach to analyze your data. This may develop as you become more comfortable with what you are learning.
- Do not be afraid to let the data influence what you are learning as you go deeper with your analysis.
- Look for themes and patterns to emerge. Look for those unique ideas that you had not considered which may influence your thinking.
- Make sure that you are organizing your data based on what you are actually learning from the data, not on the assumptions you bring with you to your analysis.
- Don't censor the data, even if you don't like what you are learning. Include data that doesn't necessarily reflect change or growth. All of this is part of the learning experience and can still inform our practice.
- Go through your data several times. New ideas will occur to you with a fresh perspective.
- Think about creating visual images of what you are learning. A grid, an idea map, a chart, or some visual metaphor are all possibilities to help make sense of the data and display a powerful presentation of your ideas.
- Write lots of notes to yourself (post-its work well) as you are sorting. This kind of reflection will help you as you step back and try to look at the big picture.

- Share your findings with a colleague. Do new questions emerge from this discussion?
- Let the data influence you. Jot down ideas for actions you will take as a result of what you are learning.

A Process for Analyzing Your Data

In using qualitative research, you will be collecting and analyzing at the same time. These processes inform each other. Be open to new ways of thinking as you learn more from your data.

1. Go through everything you have collected. Make notes as you go.

2. Look for themes, patterns, big ideas. Key words and phrases can trigger themes. Determine these themes by your scan of the data, not on your preconceived ideas of what you think the categories are.

3. Narrow the themes down to something manageable. (3-5 of your most compelling and interesting)

4. Go back through all of your data and code or label information according to the themes in order to organize your ideas. Some ideas may fit into more than one theme. Create sub-groups under each theme.

5. Write continuously. Jot down what you are seeing, what questions are emerging, and what you are learning. Keep notes on those new ideas which are unanticipated. These may be findings or surprises which you had not planned.

6. Review your information after it is coded/labeled to see if there is

- a frequency of certain items and/or
- powerful, interesting, unusual comments or behaviors which are of particular interest to you. This may be an incident which gives you a new insight, and it may be one of the most important to hold on to.

7. Identify the main points which appear most frequently and are the most powerful. It will be hard to let go of some of your information, but it is important to sift through it.

8. Write up your major points. You can write them up by

- theme,
- chronologically, or
- the different modes you used for collecting information.

9. Draw the information together to include some of the evidence which supports each of your themes. The reader should be able to draw conclusions based on the evidence you have presented.